

REMARKS

Claims 1 – 14 and new claims 15-22 are pending after entry of the present amendments. Claims 1-12 were rejected and claims 13 – 14 objected to as being dependent on a rejected claim. In response, claims 1, 2, 5, 8, 13 and 14 have been amended and arguments presented. Reconsideration and allowance are requested.

The dependent claims have been amended to better conform to US practice and form.

New claims 15-22 are presented to alternatively recite elements of the present invention. Claim 15 recites a “fuel distributor body positioned at a distance from both the inlet and the outlets.” This limitation is supported by the specification throughout; for example, see Fig. 3. Claim 16 recites differing inclinations of inlets and outlets, which is shown for example in Fig. 3. The substantially flat bottom surface of claim 17 is shown as labeled line 17 in Fig. 3. The second wall with fuel inlet and cylindrical shape of the chamber, respectively from claims 18 and 19 are shown in Fig. 3. The rotary shape and chamber shapes referred to in claims 20 and 21 likewise are shown in Fig. 3. The “rotationally fixed” fuel distributor recited in claim 22 is an inherent feature of this element and is also clear from Fig. 3. Accordingly, no new matter has been added.

OBJECTIONS

Claim 5 was objected to over the use of “16” to define both a cylinder and a side wall. In response, claim 5 has been amended to remove the double recitation. Reconsideration of this objection is respectfully requested.

The claims that have been objected to as being multiply dependent and improperly depending from a multiply dependent claim have been resolved.

Claims 8, 11 and 12 have been written into independent format for clarity and preamble consistency.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-9 and 11 have been rejected on anticipation grounds in view of Hasegawa. Hasegawa shows multiple fuel inputs formed partly by conical surface wall 72, which forms chamber 34. A rotating fuel distributor 7 exists inside Hasegawa's chamber and has fuel passages 73 that permit fuel movement through to outlet(s) 35.

Claimed embodiments concern a fuel distributor for the afterburner of an aircraft engine. Hasegawa, on the other hand, describes a variable fuel nozzle for an internal combustion engine. Hasegawa discloses a type of fuel distributor body 7, which is substantially rotary symmetric (Fig. 6 of Hasegawa). That distributor body is conical and forms a rotary valve. The distributor body is in contact with matching conical surfaces 341 in a housing. The fuel is guided from a fuel inlet 104, see figure 1, via holes 105 to a fuel reservoir 301 and further down to the distributor body 7. This structure is incompatible with that recited in the amended claims.

Thus, Hasegawa's rotary valve system is not the same as the recited injector of amended claim 1 for several reasons. As amended, claim 1 specifies a "side wall (16)," which delimits "chamber (7)" and which also provides "fuel inlet (8)." In contrast, Hasegawa describes a chamber wall that is continuous with the fuel inlets.

Furthermore, Hasegawa shows a common wall 72 that forms a fuel inlet and also contains fuel outlets. This lacks/contradicts the claim elements of "side wall (16) provided with said fuel inlet (8) and a first end wall (17) provided with said fuel outlets."

Hasegawa also lacks/contradicts the recitation: "distributor body (19)...ends at a given distance from the first end wall (17) so as to be located in front of the fuel inlet." In contrast, Hasegawa's rotary valve distributor does not end at a given distance from the first end wall but touches the wall. This is a necessary condition owing to the very different way of distributing the fuel from the fuel inlet. The claimed structure in contrast uses the distributor set a distance from

the fuel input in a manner to allow special distribution of the fuel inside the chamber, whereas Hasegawa directs the fuel through a small space in the distributor itself, while relying on the distributor to contact the recited wall. The amended claim recitation thus contradicts Hasegawa.

Applicants also note that claim 1 recites that the “fuel distributor (18) ...is arranged to distribute fuel introduced into the chamber.” Hasegawa directly contradicts this because the fuel of Hasegawa is not introduced into a chamber and then subsequently distributed or spread around by a fuel distributor. Instead, Hasegawa’s “fuel distributor 7” as the Examiner pointed out, meters an injection flow stream directly via “fuel passages 73” within the “fuel distributor 7.” This contradicts the cited passage of claim 1 and describes both a very different structure and different operation of a fuel distributing mechanism.

All rejected claims incorporate these elements of amended claim 1. Because Hasegawa lacks these several elements, a prima facie obviousness does not exist. Reconsideration and removal of this rejection courteously are solicited.

COMMENTS REGARDING US 2,978,870

The written opinion in the parent PCT application (PCT/SE2003/001479) cited US 2,978,870 (“’870”) as the most relevant prior publication from search report. Applicant respectfully asserts, however, that the current claims distinguish over that reference.

The inlet of the conduit 29 of the fuel injector in ‘870 arguably corresponds to the inlet 8 of the fuel injector. However ‘870 shows a valve arrangement between the inlet and several outlets 40 of the chamber, and the valve arrangement divides the chamber into an upper portion above a poppet and a lower portion below the poppet. This arrangement distributes fuel when the pressure from the fuel in the upper chamber exceeds the spring force of the valve.

The claimed injector lacks this valve arrangement and in contradiction (and as claimed) has chamber (7) that is delimited by at least one side wall 16 provided with fuel inlet 8 and first end wall 17, which also is provided with fuel outlets 10.

Applicants note the greatly different effect of the claimed injector compared to that of the asserted art. Because of the distributor body, which breaks up the incoming fuel within a chamber (and not via channels), wave oscillations in the fuel supplied are suppressed. Flow of fuel out of the chamber is more stable. This advantage results from the differently claimed structure and is not taught by the cited references.

REJECTION UNDER 35 U.S.C. § 103:

Claim 10 has been rejected on obviousness grounds over Hasegawa in view of Baxter. Claim 10, however, now contains the limitations of amended claim 1 which, as explained hereinabove, recites several elements that Hasegawa lacks. Baxter's description of welding to form strong connections between the parts does not remediate the claim term insufficiencies (described above) of Hasegawa with respect to amended claim 1. Accordingly obviousness does not exist. Reconsideration and removal of this rejection is respectfully requested.

CLAIMS 13 AND 14

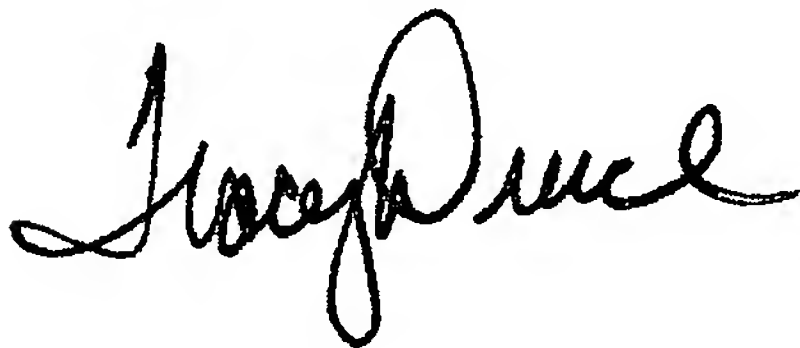
Claims 13 and 14 have been noted as containing allowable subject matter and which would be allowed if written into independent format, which has now been done. Allowance is respectfully requested.

The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 14-1437, referencing Order No. 07589.0066.PCUS00.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner should directly contact the undersigned by phone to further the discussion.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Tracy W. Druce". The signature is fluid and cursive, with the first name "Tracy" and last name "Druce" clearly distinguishable.

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